IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

ON SEMICONDUCTOR CORPORATION, and SEMICONDUCTOR COMPONENTS INDUSTRIES, LLC; Plaintiffs, v. POWER INTEGRATIONS, INC. Defendant.	C.A. No. 17-247-LPS-CJB

POWER INTEGRATIONS' RESPONSIVE CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

ON's opening claim construction brief offers up fifteen results-driven proposals that ignore the substance of both parties' claimed inventions. ON either disregards the entirety of the detailed descriptions of how the purported inventions work in favor of amorphous and unhelpful "plain meaning" constructions (for its own patents) or plucks isolated sentences from the intrinsic record without any context (for PI's patents). While ON has certainly telegraphed the crux of its validity and infringement contentions, it has done little to assist the Court in defining the claim terms.

II. ARGUMENT

A. Power Integrations Patents

1. "internally controlled signal within the regulation circuit" ('851 patent)

ON's proposed construction improperly isolates one of countless potential benefits of an internally controlled signal. In this context, one intended goal of using an internally controlled signal is admittedly to minimize exposure to external (and thus uncontrollable by the designer) variables, such as line voltage or load magnitude variations. The patent similarly explains additional benefits of an internally controlled signal, such as being "known and fixed." D.I. 67-1, Ex. H, 6:16. However, these are all merely examples of advantages of the invention as compared to the described known prior art. ON's cherry-picking only one of the multiple touted benefits in an effort to limit the term "internally controlled" shows the flaw in ON's approach. These aspirational benefits individually (or collectively) do not define "internally controlled," nor do they limit the claim term. *See, e.g.*, *Intel Corp. v. ITC,* 946 F.2d 821, 836 (Fed. Cir. 1991) (noting that goals of the invention should not be imported into the claims).

While the '851 patent criticizes the external signal of the prior art as being subject to line and load variations, nowhere in the specification, the original prosecution, or the reexamination

proceedings did the inventors equate this characteristic with all external signals or use this characteristic alone to define the invention. The inventors instead traversed the prior art by explaining that the claimed frequency variation signal is internally controlled within the regulation circuit, whereas the prior art signal was not. No further qualification was placed on the nature of the frequency variation signal, and ON's attempt to do so here should be rejected. *See, e.g.*, *Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1301–02 (Fed. Cir. 2003) ("Where, as here, the written description and prosecution history fail to express a manifest exclusion or restriction limiting the claim term, and where the written description otherwise supports the broader interpretation, 'we are constrained to follow the language of the claims,' . . . and to give the claim term its full breadth of ordinary meaning as understood by persons skilled in the relevant art." (citing cases)).

Nor does the Court need to engage in further construction to address whether an "internally controlled" signal also means "within a monolithic integrated circuit"—both parties' proposed constructions are silent on this point. Moreover, ON makes no attempt to explain how the plain and ordinary meaning of "internally controlled"—as Power Integrations proposes—speaks to whether the signal is within a monolithic integrated circuit or not. The phrase "internally controlled signal within the regulation circuit" on its face clearly defines the boundary of exclusion as *within the regulation circuit*. If the regulation circuit is comprised entirely of a monolithic integrated circuit, the signal must necessarily be within the monolithic integrated circuit. If the regulation circuit is not embodied in a monolithic integrated circuit, the claimed signal is also not so constrained. For this reason too, the Court should not diverge from the plain and ordinary meaning of the claim language.

2. "according to a magnitude of said frequency variation signal" ('851 patent)

ON's restatement of the very phrase it proposes to construe does nothing to help define the meaning of "according to a magnitude of said frequency variation signal." And ON's attempt to tack its proposed construction for the aforementioned "internally controlled signal within the regulation circuit" onto this different claim term is both unnecessary and unsupported by the record. ON correctly notes that PI's construction "does not include any recognition that the signal is 'internal.'" D.I. 83 (ON's Opening Br.) at 20. That is because the phrase "according to a magnitude of said frequency variation signal" already includes the term "frequency variation signal," which the parties agree should be construed as "*an internal signal* that cyclically varies in magnitude during a fixed period of time and is used to modulate the frequency of the oscillation signal within a predetermined frequency range." *See* D.I. 78-1 (Am. Joint Claim Construction Statement) at 17. The internal nature of the frequency variation signal is thus already explicit in the claim, and ON's attempt to inject its further narrowing construction into this term should be rejected for the same reasons discussed above.

In any event, ON's proposal inaccurately redefines the meaning of "internal" contrary to the canons of claim construction. On the other hand, Power Integrations' proposal – that the signal instructing said drive circuit to discontinue said drive signal is derived in part from the magnitude of the frequency variation signal – is both consistent with the plain meaning of the phrase and is taken directly from the specification. *See* D.I. 67-1, Ex. H, 8:60–9:27.

3. "a maximum duty cycle signal comprising an on-state and an off-state" ('366 patent)

ON incorrectly argues that Power Integrations' proposal "requires that the maximum duty cycle signal to comprise both on/off states *and* some otherwise undescribed logic state." D.I. 83 (ON's Opening Br.) at 21. Power Integrations' construction, consistent with the specification,

contemplates only two discrete states: on and off. Power Integrations' proposal clarifies only that the "on-state" of the maximum duty signal (when the signal allows the drive circuit to turn the switch on) does not necessarily correspond to the signal itself being at a high magnitude (*i.e.* a high logic state). Conversely, the "off-state" of the signal (when the signal ensures the drive circuit keeps the switch off) does not necessarily correspond to the signal being at its low magnitude (*i.e.* a low logic state). Rather it could just be the opposite. This is what Power Integrations means by *independent of* the logic state.

It is also unclear why ON rejects the use of the terms "logic" and "logic state," which are ubiquitous terms in the art, to refer to the discrete high/low levels of digital control signals. And ON's contention that the exact words are found nowhere in the specification puts form over substance. Indeed, Figure 3, excerpted below, shows the maximum duty cycle signal 607 (visually depicted as a logic signal, in contrast with the analog saw tooth signal 415, for example), which is an input to drive circuit 615 (visually depicted as and described in the specification as an "and-gate").

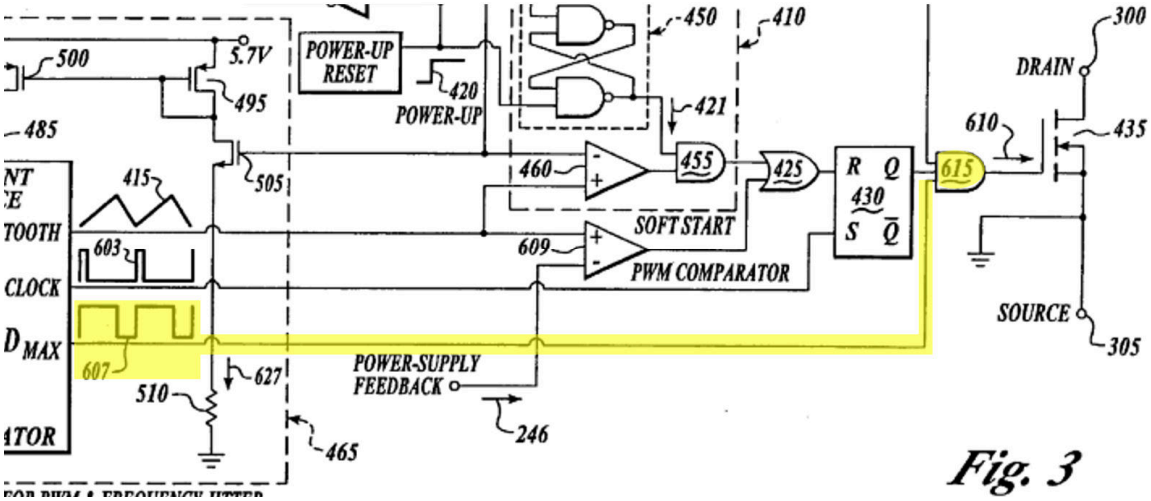


Fig. 3

Id. at Fig. 3 (excerpted and highlighted); *see also* Figs. 6 and 9 (showing same). And-gates are a type of basic logic gate that implements a logical conjunction; by definition, they receive and

output logic signals exclusively. *See, e.g.*, Ex. 8, DICTIONARY OF IEEE STANDARDS TERMS 37, 638 (7th ed. 2000) (defining "and-gate" and "logic").[1] Though not described in the specification using the exact words, the maximum duty cycle signal is unquestionably a *logic* signal.

Moreover, regardless whether ON should be bound by the prior stipulation between Power Integrations and ON's subsidiary Fairchild, the fact that Fairchild also agreed to the very same construction Power Integrations proposes here (including the concept of independence and the "logic state" terminology) – is certainly strong evidence that Power Integrations' proposal is neither unnecessary nor unclear, as ON suggests. *See* Ex. 9, C.A. No. 04-1371-LPS, Fairchild's Opening Claim Construction Br., Ex. A. It is the only accurate proposed construction.

4. "soft start circuit means" ('366 patent)

The arguments raised in PI's Opening Brief with respect to the impropriety of including a "frequency variation signal" and all of its attendant limitations as necessary structure of the "soft start means" apply with equal force to ON's attempt to likewise require a "pulse width modulation frequency signal." While the parties agree that the "soft start circuit means" has a function corresponding to the plain meaning of the claim terms and a structure shown in Figures 3, 6, and 9 and described in 6:7–17, 6:35–7:18, 11:40–50, 12:5–10 of the patent, that certainly does not mean that *each and every* structure shown in these figures is necessary to perform the soft-start function. Indeed, each figure shows circuitry implementing soft-start, but also other unrelated circuitry that performs different functions germane to different aspects of regulation and different inventions (like frequency jitter). The only aspects of the cited disclosures that define the corresponding structure of the soft start circuit means are those *necessary* to perform the soft-start function.

[1] Exhibits 8–15 are attached to the contemporaneously filed Declaration of Warren K. Mabey Jr.

The soft start circuit disclosed and claimed in the '366 patent uses the comparison between a first, slowly ramping, signal to a second, oscillating, signal to limit and gradually increase the on time of the switch during the so-called soft start period. *See* D.I. 67-1, Ex. I, at 6:35–7:18; Fig. 4. What drives the soft start functionality is the slowly increasing difference between the first signal and each repeating instance of the second signal. *See also id*. at 9:14–23. In the preferred embodiments, the initial ramping of the frequency variation signal provides the necessary first signal with a slowly increasing magnitude. But the frequency variation signal has other characteristics that are linked to other, unrelated, functions of the preferred embodiments and not to the soft start functionality. Similarly, the soft start means requires a signal that ramps up during each switching cycle to represent the elapsed on-time of the switch. The PWM oscillator of the disclosed embodiments provides a sawtooth "pulse width modulation frequency signal" to the soft start circuit for this purpose. However, the pertinent characteristic of this second signal is to represent the elapsed on-time of the switch; the soft start function does not require *all* of the other characteristics of the pulse width modulation frequency signal used in the preferred embodiment. The Court should, therefore, revisit its claim construction from the prior litigation and reject ON's proposal that the structure requires the specific preferred examples of a "frequency variation signal" and a "pulse width modulation frequency signal."

5. "the feedback signal cycling [periodically] between a first state and a second state when the power supply operates normally" ('788 and '475 patents)

Contrary to ON's contention, and as explained in PI's Opening Brief, the specification supports—and indeed, mandates—that the feedback signal cycles between two discrete logic states and does not vary continuously in an analog fashion. As with its argument regarding "a maximum duty cycle signal comprising an on-state and an off-state," ON primarily argues that the results of a search of the specification for the phrase "logic state" is determinative. Again

ON puts form over substance. The specification describes in detail the binary nature of the feedback signal, *see* D.I. 67-1, Ex. J, 4:45–60, 5:25–53, 5:54–6:2; 6:15–7:6, and the figures illustrating the various signals also show the feedback signal as having only two discrete logic states. *Id.* at Figs. 2, 4. Consistent with the description of the invention in the specification, the claims recite that the feedback signal cycles *between a first state and a second state*.

ON's suggestion – that had PI intended to limit the invention to digital feedback signals, it should have claimed that the signal periodically "pulses" between states – is inapposite. When viewed in the context of the specification, it is clear that the claimed signal cycling *between a first state and a second state* is a signal that periodically transitions from one logic state to another. Thus, the choice of the particular term "cycling" is consistent with the specification, and the fact that a different term could have been used to describe the same operation is neither here nor there. ON's proposed construction, on the other hand, would expand the scope of the claim to capture the very same prior art *analog* feedback signals that are at odds with the goals of the inventions disclosed in the '788 and '475 patents. *See, e.g.*, '788 patent at 4:20–28.

6. "a timer" ('788 patent)

ON's use of ellipses in a quotation to suggest that the specification contemplates the "timer" of claim 1 may be limited to a single capacitor in isolation mischaracterizes not only the teachings of the patent generally but also the very passage it cites. The passage, cited in full in PI's Opening Brief, makes clear that the capacitor requires additional components to operate as a "timer." *See* D.I. 67-1, Ex. J, 1:65–2:12.

Moreover, ON does not even attempt to address the claim differentiation problem with its proposed construction; that dependent claims 5 and 8 specifically require the "timer" of independent claim 1 to include a capacitor and digital counter, respectively, strongly suggests the unqualified term is not so limited in the independent claim. *See InterDigital Comm'ns., LLC v.*

ITC, 690 F.3d 1318, 1324–25 (Fed. Cir. 2012) ("The doctrine of claim differentiation is at its strongest in this type of case, where the limitation that is sought to be 'read into' an independent claim already appears in a dependent claim." (citation and internal quotation marks omitted)).

Finally, ON's argument that the claimed timer does not measure the elapsed time is both contrary to the common understanding of the word and finds no support in the specification. Notably, ON cites only to one sentence in the summary, and nowhere in the actual description of the invention, to support its contrived reading. The Court should thus reject ON's proposal in favor of the term's plain and ordinary meaning.

7. "timing the feedback signal" ('475 patent)

As an initial matter, ON's argument regarding "timing the feedback signal" is irreconcilable with its argument regarding the preceding term, "a timer." The '788 and '475 patents share a common specification. Yet ON simultaneously contends the "timer" (from the '788 claims) should be defined contrary to its plain meaning, while arguing the "timing" function performed by the timer (from the '475 claims) is somehow consistent with its commonly understood usage and should not be informed by the specification. *Compare* D.I. 83 (ON's Opening Br.) at 27–28 with 28–29. ON misses the mark in both instances, and the Court should reject ON's inconsistent efforts in furtherance of litigation-driven constructions.

ON's argument with respect to "timing the feedback signal" ignores and is directly at odds with the specification's discussion of the invention, as explained in PI's Opening Brief at 12–13. Moreover ON's argument ignores the context of the surrounding claim language. ON suggests that "[h]ad the patent applicants sought to claim the time between cycles of the feedback signal, the applicant could have easily claimed 'timing a cycle of the feedback signal' or 'timing a period of the feedback signal,'" D.I. 83 (ON's Opening Br.) at 28, but doing so would have been unnecessarily redundant given surrounding context. Claim 17 recites in full:

> 17. A method for protecting a power supply from fault conditions, comprising:
> in response to a switching signal, enabling or disabling the delivery of power to an output of the power supply;
> receiving a feedback signal representative of the output of the power supply, ***the feedback signal cycling between a first state and a second state when the power supply operates normally*** and ***not cycling between the first and second states when the power supply is in a fault condition***, the switching signal cycling separately from the cycling of the feedback signal;
> timing the feedback signal to detect whether a fault condition exists in the power supply; and
> preventing the switching signal from enabling power delivery to the output in response to the detection of a fault condition.

D.I. 67-1, Ex. K, 8:49–64. The preceding language before "timing the feedback signal" explains the *only* relevant characteristic of the feedback signal that could be "timed" in order to detect whether a fault condition exists: *the time between cycles*. Because ON's proposal is divorced from both the specification and the surrounding claim language, it should be rejected.

B. ON Patents

1. "generat(e/ing) a [] signal . . . in response to" ('298, '705, '407, '923 patents)

While "in response to" may indeed be an "everyday phrase" (as ON contends), that phrase can have numerous meanings depending on context and, regardless, the phrase has a specific meaning in the context of the asserted Yang synchronous rectification ("SR") patents. Moreover, despite ON's complaint that PI's construction would require "complex mathematical and logical construction," it is indeed the very existence of these purported mathematical relationships between the claimed circuit parameters that underlies the alleged inventions. As explained in detail in PI's Opening Brief, at pages 14–17, the Yang SR patents all purport to generate a first signal having a quantifiable value derived in part from the quantifiable value of some other known variable in the circuit. In other words, it is the *nature* of each generated signal, and not merely its *existence*, that defines the claimed inventions.

ON's proposed alternative construction—replacing "in response to" with "in reaction to"—would render meaningless the numerous mathematical relationships disclosed in the Yang patents that purport to link the various implicated terms. Because the whole purpose of synchronous rectification is to control the passing of the current from the magnetic device to the output during demagnetization, every power converter that utilizes synchronous rectification could be said to control the synchronous switch "in reaction to" the magnetization and demagnetization of the magnetic device. The '298 patent explains this basic principal of all synchronous rectification controllers; that is, to turn on and off the synchronous switch at the appropriate time during the magnetization and demagnetization cycle of the device. *See* D.I. 67-1, Ex. B, 1:21–63. So in the context of claim 1 of the '298, for example, "generating a control signal in reaction to a magnetized voltage of the transformer, a demagnetized voltage of the transformer, and a magnetization period of the transformer" would read on generating a SR control signal in all the ways disclosed in the prior art synchronous rectification circuits cited in the patent itself. Similarly, "generating a control signal in reaction to a magnetized voltage of the magnetic device and a demagnetized voltage of the magnetic device," as recited in claim 1 of the '705 patent, would read on essentially every synchronous rectification circuit ever. Not only would that be antithetical to the teachings of the patents, but it would also capture the very same prior art that the inventor proposed to overcome. ON's construction is thus unreasonably broad and improperly omits any consideration of the disclosure in the specification.

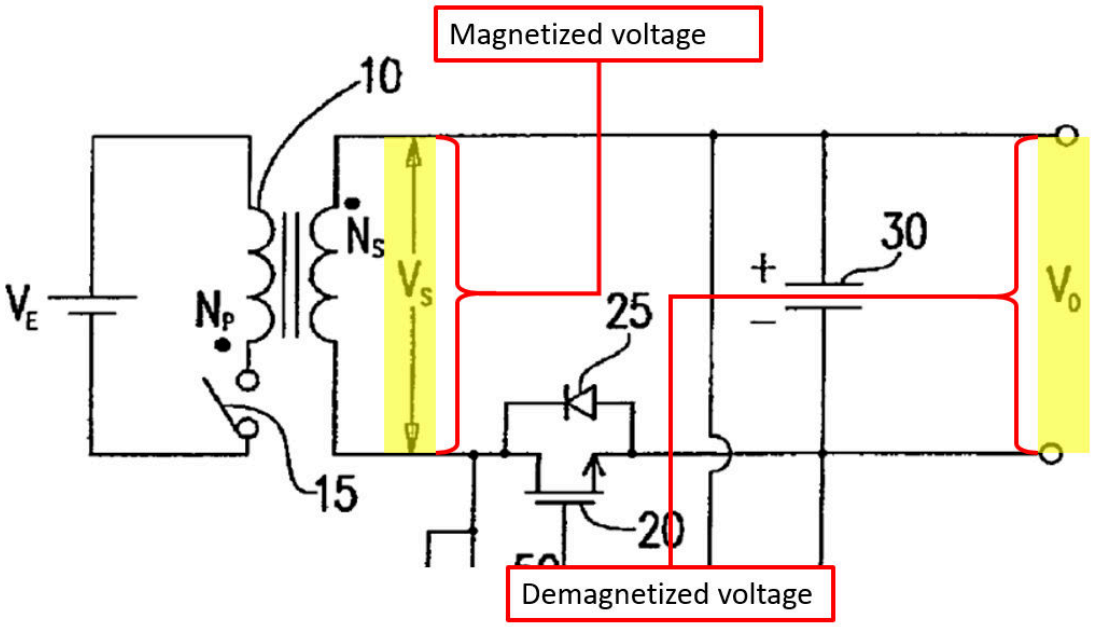
2. "magnetized voltage" (and "demagnetized voltage") ('298 and '705 patents)

ON's proposal would impose an unwarranted limitation that all claims require a transformer with distinct primary and secondary windings and the magnetized / demagnetized voltage must be generated at the transformer's distinct secondary winding. In doing so, ON imports a limitation from a specific embodiment that ignores the purpose of the invention, which

is to measure the state of magnetization of the magnetic device (in some embodiments) or the transformer (in other embodiments). Regardless of the embodiment, the purported invention is unconcerned with the nature of and relationship between the type and number of windings of the magnetic device (or transformer). As explained by PI, the focus for both terms should be on the voltage at the output of the magnetic device or transformer *when the magnetic device is magnetizing and when the magnetic device is demagnetizing*, respectively. *See* D.I. 81 (PI's Opening Br.) at 17–20.

ON is correct that the patents refer to the voltage "at" (magnetized) and "applied to" (demagnetized) the secondary winding and not "across" the secondary winding as in PI's proposed construction. But PI's proposed terminology is far from ambiguous or confusing, as ON contends. The term "voltage," as used by the inventor in the patent and as understood by those skilled in the art, refers to electrical potential and necessarily means the *difference* in electric potential between two references. *See, e.g.*, Ex. 8 (IEEE DICTIONARY) at 1260; Ex. 10, MODERN DICTIONARY OF ELECTRONICS 835 (7th ed. 1999). By definition, there can be no voltage "at" a single point without a second point of reference.

ON's proposal, mirroring the shorthand terminology used in the specification, though accurate so far as it goes on this point, is incomplete. The patents explain that "a magnetized voltage V_S is produced at the secondary winding N_S." D.I. 67-1, Ex. B, 1:26–27. Figure 3, however, further clarifies that the voltage "at the secondary winding" in fact necessarily means the voltage *across* the winding. Similarly, the patent explains "[a] demagnetized voltage (the output voltage V_O) is thus applied to the secondary winding N_S during the demagnetization period," *id*. at 1:29–32; *see also* 3:5–8, and again, Figure 3 explains that "applied to the secondary winding" means *across* the winding.



Id. at Fig. 3 (excerpted and annotated). Moreover, contrary to ON's argument, the demagnetized voltage across the winding is in fact expressly limited to the *output voltage* in the context of the '298 and '705 patents. *See, e.g.*, *id.* at 1:29–32, 3:5–8, 3:38, 3:65–67 (expressly equating the two voltages). Nothing else makes sense in the context of the alleged invention.

While PI believes that its proposed constructions are both technically sound and accurately reflect the intrinsic evidence, it does not believe that the "at/across" and/or "which is the output voltage" language is dispositve of the parties' actual dispute. As such, PI proposes the following compromise constructions, which address both parties' concerns while holding true to the purported inventions disclosed in the patents:

- "magnetized voltage"—the voltage at the output of the [magnetic device / transformer] during the magnetization period;
- "demagnetized voltage"—the voltage at the output of the [magnetized device / transformer] during the demagnetization period.

3. "polarity of the pulse signal(s)" ('923 and '407 patents)

ON provides no support for its contention that "the concepts of a pulse signal and the polarity of a signal are well known," nor does it provide any dictionary definition(s) or other extrinsic evidence that would corroborate its supposedly commonly understood definition of "a high or low state of the pulse signal(s)." For good reason: the term "polarity" connotes a signal having *positive* and *negative* amplitudes and not merely a high and low state. PI cited multiple dictionary definitions in its Opening Brief, at page 23, refuting ON's purported plain meaning. Those previously cited definitions are also in accord with numerous other definitions of "polarity" from both techical and common usage dictionaries. *See, e.g.*, Ex. 8 (IEEE DICTIONARY) at 838; Ex. 11, MERRIAM-WEBSTER'S COLLEGIATE DICTIONARY 957 (11th ed. 2007). PI's construction holds true to these definitions; ON's interpretation of polarity does not.

As to ON's complaint that PI's proposed definition "would convert a simple phrase of five words into a complex definition of twenty words," PI can respond only that its intention—and the very purpose of claim construction—is accuracy, not brevity for brevity's sake. For the same reason, each of the cited dictionary definitions uses far more than a single word to define "polarity." PI could have arguably conveyed essentially the same important concept in fewer words (*e.g.*, "the positive and negative orientation of the pulse signal" or "the positive or negative state of the pulse signal"). Regardless, the most succinct definition of "polarity" would be incomplete if it required only a high and low state.

The '923 and '407 patents define "polarity" consistent with this common usage and specifically propose to exploit the positiveness and negativeness of the pulse signal. Contrary to ON's argument, the discussion in three lines of one of the patents is far from an accurate or complete description of the polarity of the '923 and '407 patents' claimed pulse signals. Indeed, the single sentence ON paraphrases does not purport to explain *polarity* at all, but rather the

relationship between two different sets of signals, coincidentally also described as having polarity. D.I. 83 (ON's Opening Br.) at 4, citing D.I. 67-1, Ex. D, at 3:57–59 (which reads: "The polarity of pulse signals S_P and S_N (active low) is opposite to the polarity of the pulse signal X_P and X_N (active high)."). That same sentence appears nowhere in the '407 patent's specification, nor does that patent refer to the pulse signals as having "states" that are "high" and "low."

The complete discussion, found in the specifications of *both* patents and cited in PI's Opening Brief, however, consistently refers to the pulse signals as having "positive-polarity" and "negative-polarity," and visually depicts the same in the figures. *See, e.g.*, D.I. 67-1, Ex. D, 4:14–18, Figs. 2 and 14; D.I. 67-1, Ex. E, 5:25–30, 7:52–54, Figs. 2 and 17. The Court should embrace this consistent usage in the construction of "polarity." *See, e.g.*, *Am. Piledriving Equip., Inc. v. Geoquip, Inc.*, 637 F.3d 1324, 1333 (Fed. Cir. 2011) (using "consistent reference throughout the specification" to construe the claim).

4. "power-switch set" ('923 patent)

ON's claim differentiation argument is predicated on a highly misleading use of "[.]" This omission drastically changes the meaning of dependent claim 2, which states in full:

> 2. The offline synchronous regulator as claimed in claim 1, wherein said power-switch set is formed by a first switch and a second switch *connected in series; said first switch has a first diode connected in parallel, said second switch has a second diode connected in parallel; said control circuit generates a first control signal and a second control signal; said first control signal is coupled to control said first switch, said second control signal is coupled to control said second switch*.

D.I. 67-1, Ex. D, 9:21–29. The import of the dependent claim is not solely that the power-switch set comprises two switches (*i.e.* transistor devices), as ON argues, but rather the orientation of those switches in relation to each other (they are connected in series) as well as the relation to other circuit components (diodes connected in parallel) and interaction with circuit signals (first and second control signals). That is all the more apparent when viewed in the context of the

specification's actual teachings. *See, e.g.*, D.I. 67-1, Ex. D, 5:55–7:6; Figs. 1, 2, 9, 10 (all demonstrating a circuit that generates two gate-driving signals controlling two transistors).

ON's contention that there is no support in the specification showing the power-switch set "must include two transistors as opposed to, for example, a single transistor and a single diode," D.I. 83 (ON's Opening Br.) at 6, is thus, inaccurate. The specification's only discussion of the power-switch set (in Figure 9 and related discussion at 5:55–6:11) shows that the power-switch set comprise ***multiple*** transistor switches. And "while it is of course improper to limit the claims to the particular preferred embodiments described in the specification, the patentee's choice of preferred embodiments can shed light on the intended scope of the claims." *AstraZeneca AB, Aktiebolaget Hassle, KBI-E, Inc. v. Mut. Pharm. Co.*, 384 F.3d 1333, 1340 (Fed. Cir. 2004). The explicit description of the power-switch set as comprising two transistor devices is consistent with the rest of the disclosure of how the claimed regulator circuit purports to operate (in the discussion of the control circuit at 6:12–7:6). By contrast, nothing in the specification explains how or even suggests that a single transistor and a single diode could be configured to receive multiple gate-driving signals (S_1 and S_2) in response to multiple pulse signals (S_P and S_N) from the switching circuit in the claimed regulator. The Court should, therefore, reject ON's proposed construction as inconsistent with the common meaning of the phrase "power-switch set" and every embodiment contemplated by the specification.

5. "generating a compensation signal in accordance with a synchronous rectifying signal" ('258 patent)

Though ON acknowledges that this claim language concerns *how* the compensation signal is generated, its proposed dictionary definition is silent on that question and thus unhelpful in resolving the parties' dispute. While dictionary definitions may be a useful guide—and indeed, PI has relied on dictionary definitions—they cannot supplant the express teachings of the

specification. *See Trs. of Columbia Univ. v. Symantec Corp.*, 811 F.3d 1359, 1363 (Fed. Cir. 2016) ("The only meaning that matters in claim construction is the meaning in the context of the patent."). Indeed, "[t]he main problem with elevating the dictionary to . . . prominence is that it focuses the inquiry on the abstract meaning of the words rather than on the meaning of claim terms within the context of the patent." *Phillips v. AWH Corp.*, 415 F.3d 1303, 1321 (Fed. Cir. 2005) (en banc). Accordingly, dictionaries play a role subordinate to the intrinsic evidence. ON, however, does not even attempt to grapple with the meaning of the term in the context of the patent; indeed, absent from ON's Opening Brief are any supporting citations to the specification.

The intrinsic record, however, does provide clear guidance as to the meaning of "in accordance with" in this particular context and supports PI's proposed construction that the compensation signal is actually *derived from* the duration of the synchronous rectification signal's on-time. *See* D.I. 81 (PI's Opening Br.) at 25–26. ON's proposed construction, which merely replaces the phrase, "in accordance with," with another ambiguous phrase from the extrinsic record ("so that it conforms to") does not accurately reflect the inventor's description of the claimed subject matter and specifically, *how* the compensation signal is generated in the context of the claimed invention. *See PPC Broadband, Inc. v. Corning Optical Comm'ns RF*, 815 F.3d 747, 752 (Fed. Cir. 2016) ("The fact that [a claim term] has multiple dictionary meanings does not mean that all of these meanings are reasonable interpretations in light of [the] specification."). Therefore, the Court should reject ON's amorphous redefinition in favor of PI's construction, which is grounded in the specification.

6. "error amplifier" ('258 patent)

PI's proposal is consistent with both the commonly understood definition of this electronic component and its use in the '258 patent. ON's professed concern with regard to the "proportional" requirement in PI's proposal is confusing and irrelevant to the parties' actual

dispute, which is necessitated only by ON's assertion in its preliminary infringement contentions that a very different type of device, a "comparator," satisfies the "error amplifier" limitation. PI seeks only to clarify that an "error amplifier" is, in fact, an error amplifier and not a comparator. The two devices perform different functions and are not interchangeable. ON's proposal, however, would impermissibly encompass both.

An error amplifier by definition generates an analog signal output representative of the difference between its two input signals. *See, e.g.*, D.I. 81 (PI's Opening Br.) at 27 and Ex. 4 (IEEE DICTIONARY) at 395 (defining "error signal" as "the difference between a sensing signal and a constant reference signal."); *see also*, Ex. 8 (IEEE DICTIONARY) at 32 (defining "amplifier" as "a device that enables an input signal to control a source of power and thus is capable of delivering at its output an enlarged reproduction or analytical modification of the essential characteristics of the signal."). Thus, an error amplifier generates an amplified output that preserves the essential characteristics of the inputs. A comparator by contrast, and as its name implies, merely compares two input signals and outputs a logic state signal indicating whether one is larger than the other. *See, e.g.*, Ex. 8 (IEEE DICTIONARY) at 199–200 (defining "comparator" as " [a] circuit, having only two logic output states, for comparing the relative amplitudes of two analog variables, or of a variable and a constant, such that the logic signal output of the comparator uniquely determines which variable is the larger at all times."); Ex. 10 (MODERN DICTIONARY OF ELECTRONICS) at 137 (defining "comparator" as a circuit that compares two inputs and generates a binary output indicating agreement or disagreement).

As explained in PI's Opening Brief, the '258 patent's specification describes feedback systems that require the claimed error amplifier to operate consistent with its commonly understood meaning; that is, to generate an analog signal output (V_F) that is representative of the

actual difference between the two inputs (V_{REF} and V_A). ON's proposal does not require the error amplifier to generate an output that retains this essential characteristic and thus it would read on a comparator. To focus the dispute, however, PI is willing to agree that, for the purpose of this litigation, an "error amplifier" in the context of the '258 patent is "a circuit component that generates an output having a magnitude ~~proportional to~~ representative of the difference in magnitude between two input values; not a comparator." This would both alleviate ON's professed concern regarding "proportionality" and obviate PI's concern that ON will attempt to read this limitation on a dissimilar device that performs an entirely different function.

7. "common leads projecting out from the resin-sealing body" ('211 patent)

ON relies on the word "out" in "projecting out from" to argue that "each common lead must . . . begin inside of and extend outside of the body." D.I. 83 (ON's Opening Br.) at 10. But "out" only defines the *direction* of the "projecting." In other words, the leads extend in a direction *away* from the resin-sealing body, as opposed to "in" to it.[2] The claim language, moreover, does not say that the leads project out *of* the resin; instead, the patentee chose "from."[3]

ON next contends that leads must begin inside of the resin to transfer heat. D.I. 83 (ON's Opening Br.) at 10. This is wrong. Nothing in the '211 patent excludes devices with an island that extends to the edge of the resin-sealing body, and in such devices the heat is transferred from the island to the leads and out of the package without the leads extending inside. ON itself has described one prior art reference, Japanese Unexamined Patent Application Publication No. H03-250653, as disclosing leads that do not extend inside the resin-sealing body, without disputing

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[2] A structure could project *in* from, as opposed to *out* from, a resin-sealing body. *E.g.* Ex. 12 (U.S. Pat. 4,483,441) at 4:33-41, Figs. 4, 5 (describing a semiconductor package with "fixing pieces" that start at the boundary of and "project inward from" a resin-sealing body).

[3] Likewise, "project out from" can describe elements that start at and extend away from a boundary. *E.g.*, Ex. 15 (U.S. Pat. 3,766,440) at 3:30-32, 3:54-58, 4:60-64, Fig. 5 (stating that fins 42 "project out from" substrate 10 by starting at the boundary and extending away).

that those leads are designed dissipate heat. *See* Ex. 13 (IPR2018-0399 Preliminary Response) at 10–16, Ex. 14 (Certified Translation of H03-250653) at ¶ 13. Thus, "projecting out from the resin-sealing body" requires no construction.[4]

8. "hybrid integrated circuit board" ('211 patent)

Based on nothing more than attorney argument, ON asserts this term needs no construction because "the claims themselves thoroughly describe the physical configuration of the board." D.I. 83 at 11. But simply because a claim describes (as it must) how an element interacts with other parts of an invention does not mean that element need not be construed when the parties dispute the nature of the element itself. *O2 Micro Int'l Ltd. v. Beyond Innovation Tech. Co.*, 521 F.3d 1351, 1361-62 (Fed. Cir. 2008).

Here, the dispute is whether a person of ordinary skill would have understood that a hybrid integrated circuit board could consist of nothing more than an uninsulated, conductive lead frame. The structure of the claim and the specification both show that the answer is no. Claim 5 requires that the conductive pattern and hybrid integrated circuit board are separate structures, with one "formed at least on a surface of" the other. Reading the claim not to require the hybrid integrated circuit board be formed separately from the conductive pattern effectively reads the structural requirements out of claim 5 and thus "impermissibly broaden[s] the claim." *Enzo Biochem, Inc. v. Applera Corp.*, 780 F.3d 1149, 1154 (Fed. Cir. 2015) (reversing construction that did not conform to the structural requirements of the claim).

The specification likewise discloses three structures formed separately: the hybrid integrated circuit board, a conductive pattern formed on it, and the leads connected to the pattern. D.I. 67-1, Ex. G at 4:38–61; *see also id.* at 5:4–5, 5:20–24, 5:35–37, 6:65–7:2, Figs. 5A–6A; *see*

[4] ON does not address the "physically separate" limitation in PI's construction, and should not be permitted to do so for the first time in its answering brief.

Becton, Dickinson & Co. v. Tyco Healthcare Grp., LP, 616 F.3d 1249, 1254–55 (Fed. Cir. 2010) (claim describing two structures "connected to" each other cannot encompass a single structure). The specification explains that this arrangement dissipates more heat than the simple lead frame of the first embodiment, D.I. 67-1, Ex. G at 5:55–65, which is formed from a single piece. *See Enzo*, 780 F.3d at 1156 (using the specification "to more fully understand what the patentee claimed").

PI's "insulated or non-conductive board" limitation is consistent with this intrinsic record. ON argues that the specification includes a "metal board" that is "conductive," but ON omits that the specification and every relevant figure disclose that such a metal board must be "coated with an insulating resin." D.I. 67-1, Ex. G at 4:37–56, 5:20–24, 6:65–7:2, Figs. 5A–6A. Nor does ON explain how an operable "conductive pattern" could be formed on the surface of a *conductive metal board* without an insulating layer between the pattern and the board.[5]

III. CONCLUSION

For the reasons stated above and explained in PI's Opening Brief, the Court should adopt PI's proposed constructions of the disputed claim terms.

[5] ON offers no support for its "plurality of electronic elements" limitation, which conflicts with the rest of the claim, and should not be allowed to do so in its answering brief.

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